



Partners in Education

LAWRENCE LIVERMORE NATIONAL LABORATORY



K-12 Science Enrichment Programs

Lawrence Livermore National Laboratory (LLNL) is a premier research facility that conducts some of the nation's most innovative science. As a Department of Energy national lab, LLNL is committed to enhancing science and technology education. This brochure describes the Laboratory's programs that serve K-12 students in the Tri-Valley and San Joaquin Valley. Unless otherwise noted, programs are free of charge, but may require registration.

“Livermore Lab’s science education programs are a valuable asset to our students and teachers, providing real-world connections to learning and inspiring students to pursue science and engineering in their education and career choices.”

*Kelly Bowers, Assistant Superintendent for Educational Services,
Livermore Valley Joint Unified School District*

Super Science Field Trips for 5th grade classes are available Monday through Friday mornings, September through June, except holidays. Summer field trips are available as resources allow. One class participates at a time to maximize student involvement and interaction. The popular half-day program includes a visit to the Lab's Discovery Center, followed by an interactive Fun With Science show. Approximately 5,400 students, teachers, and chaperones participate annually. The program fills up fast, so register early.

“This is one of the best field trips I have taken my class on. The kids loved it and were excited. The parents also loved it!”

Connie Ormond, teacher, Arroyo Seco Elementary School, Livermore

Scout and Science Club Field Trips allow students to experience a science adventure at the Laboratory's Discovery Center. The Discovery Center has a variety of displays relating to the Lab's incredible science and engineering in support of national and homeland security and other important areas of science. Students create their own earthquake, generate energy on an energy bike, and handle the lightest substance made — aerogel. The Discovery Center is open Tuesday through Friday, from 1 to 4 p.m. and Saturday, from 10 a.m. to 2 p.m.

Livermore Lab co-sponsors two annual **Expanding Your Horizons (EYH)** career conferences for young women. Conferences are held in San Ramon in March and Stockton in October. EYH is intended to spark girls' interest in mathematics and science through positive, hands-on experiences and career discussions with professionals. Approximately 800 girls attend the two conferences each year. Registration fees vary per conference location.

“EYH is a wonderful opportunity for young women to explore career options in math and science.”

Pam Newman, parent, Livermore

Science on Saturday (SOS) is a series of one-hour Saturday science lessons for middle and high school students and teachers. Topics are taken from the forefront of science and technology research. Lessons are presented collaboratively by Lab scientists and science teachers. Each presentation has two components:





fundamental science and an example of “Big Science” conducted at LLNL. The fundamental science portion provides the background needed to understand the science being featured. “Big Science” illustrates how research performed at LLNL is used to solve real problems in the national interest. SOS is held in Livermore and Tracy and at other locations. Registration is not required. Seating is first come, first served. Due to program popularity, arrive early to get good seats.

“Science on Saturday is a wonderful opportunity for middle and high school students in our community that provides a valuable window into state-of-the-art research at LLNL. Students and teachers are brought into crucial and timely discussions on topics that not only benefit their educational career, but also our community and our world.”

James Franco, Superintendent, Tracy Unified School District

Science Fair 101 is a hands-on program designed to give middle and high school students a competitive edge in science fair research projects. The program, taught collaboratively by Lab scientists and high school science teachers, helps students develop, plan and present their science fair project. Science Fair 101 is offered during the fall at LLNL. Registration is limited to 80 students.

The Lab’s annual **Tri-Valley Science and Engineering Fair**, held in March, is a project competition for 7–12th graders in the Livermore, Pleasanton, Dublin, San Ramon and Sunol school districts. The fair provides a forum for

students to present their scientific work, interact with LLNL scientists and receive feedback on their efforts. Students are awarded scholarships, cash prizes and other non-monetary recognition for outstanding work. Approximately 300 students participate each year. Junior sweepstakes winners go on to compete in the California State Science Fair. Senior sweepstakes winners are invited to compete in the prestigious Intel International Science and Engineering Fair held annually in May. The Intel fair brings together more than 1,400 students from more than 40 nations to compete for scholarships, tuition grants, internships, scientific field trips and the \$50,000 grand prize college scholarship.

“It’s exciting to see students step outside of the box and do some actual scientific research instead of the typical recipe lab project. Guiding them through the steps of scientific investigation is well worth the little bit of extra time on my part. I’m always hearing from former science fair students how it was one of the highlights of their high school years.”

Patti Carothers, science teacher, Monte Vista High School, Danville

Further Information

For further information about these K–12 student programs, refer to the Lab’s Education Web page (<http://education.llnl.gov/>). Special public science programs, in addition to those described above, are offered periodically and are highlighted on the Lab’s Public Events Web page (<http://www.llnl.gov/llnl/community/events.jsp>).

